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Rice

Outlook and Situation Report



Record yields and increased acreage boost production 37 percent, page 2



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Summary

The 1984 U.S. rice harvest is expected to rebound to 136.4 million cwt, up 37 percent from 1983's payment-in-kind (PIK)-reduced crop. Harvested area is estimated at 2.8 million acres, and national average yields are likely to surpass the 1981 record level of 4,819 pounds per acre, averaging 4,880 pounds nationally.

The 1984/85 season began with 47 million cwt of rice in carryin, down a third from year-earlier stocks. Thus, total rice supplies for 1984/85 are estimated at 184 million cwt, about 12 million more than 1983/84. Of the 1984/85 total supply, long grain rice is expected to comprise about 60 percent. A long grain carryin of about 16 million cwt and production of nearly 94 million cwt will bring long grain supplies up to 111 million. Supplies of medium and short grain rice may reach 72 million cwt, with 29 million in stocks and about 43 million harvested.

Little improvement is expected in rice disappearance during the 1984/85 season. Forecasts are 55 million cwt for domestic use and 68 million cwt for exports, which are continuing their sluggish pace; therefore, carryover at the end of 1984/85 may creep back up to nearly 55 million cwt. Furthermore, for the first time in 4 years, the long grain carryover may exceed that of medium and short grain. A gradual shift toward long grain production, unmatched by a similar outlook for its disappearance, may reverse the 4-year trend of tight long grain ending stocks.

With season average farm prices forecast in the range of \$8 to \$9 per cwt, the 1984/85 season is likely to be a repeat of the previous season: stability in prices and demand, with little prospect for strong recovery in either.

The 1985 rice program, including a 20-percent acreage reduction program (ARP) and a 15-percent cash land diversion (CLD), was announced by Secretary Block. Participants will be eligible to receive deficiency payments, currently estimated by USDA at \$3.80 per cwt, and diversion payments of \$3.50 per cwt.

Global rough rice production is forecast at a record 452 million metric tons in 1984/85, topping the previous record set in 1983/84 by 1 percent. Global consumption of milled rice is also expected to rise, from 305 million metric tons in 1983/84 to 308 million in 1984/85. The 1-percent boost in consumption was offset by higher output, leaving carryover almost unchanged, at 16.8 million tons milled basis compared with 16.9 million at the end of 1983/84.

A smaller rice crop forecast for Thailand could mean a slight decline in export availability for 1985. Thailand's rice harvest in 1984/85 is forecast at 18.5 million tons, compared with a record 18.8 million tons in 1983/84. Although 1984 is likely to be a year of record rice exports for Thailand, with exports exceeding 4.2 million metric tons, the decline in production could mean slightly smaller exports in 1985, with exports possibly dropping to 4 million tons.

Although the world rice supply and demand situation is expected to tighten into 1985, the prospects for improvement in world trade are small. However, good crops in many importing countries are expected to ease pressure on world rice demand. Import needs of Bangladesh, India, Indonesia, Japan, and the Philippines are the key factors to watch in world rice trade in 1985. At present, world rice trade is forecast at 11.9 million tons, down 4 percent from 12.4 million tons estimated for 1984.

This issue of the *Rice Outlook and Situation* contains a special article focusing on the Thai rice sector—progress over the past years and prospects for continued rice production and exports.

1984/85 OUTLOOK AND SITUATION

1984 Rice Program Attracts Strong Participation

The 1984 rice program called for producers to comply with a 25-percent reduction in planted base acreage in order to be eligible for program benefits, including an \$11.90-per cwt target price and a loan rate of \$8. According to a report released this spring, rice producers enrolled 3.64 million acres, or 87.5 percent, of their 4.16-million-acre base in the program. Based on full compliance, the enrollment figures suggest that participants could have idled 910,000 acres and still planted about 2.73 million acres. In addition, if nonparticipants had planted their full base, 520,000 acres, total rice plantings could have been about 3.25 million acres. Instead, significant underplanting of the rice base occurred, especially by nonparticipants. Planted rice area in 1984 totaled only 2.85 million acres, with harvested area estimated at 2.8 million. Nevertheless, 1984 harvested area is up almost 30 percent from the payment-in-kind (PIK)-reduced levels of 1983.

Yields are also expected to post strong gains in 1984 compared with a year earlier. Nationally, average yields are estimated at a record 4,880 pounds per acre for the 1984 crop, posting a solid 280-pound increase over 1983. Yields this year are back in line with expectations relating to acreage reductions. An average yield of 4,880 pounds exceeds the record set in 1981/82 by 1 percent, when national average yields were 4,819 pounds per acre.

The 30-percent increase in harvested area plus a 6-percent increase in average yields over the 1983/84 season is expected to produce a U.S. rice crop of 136.4 million cwt, about 37 percent higher than the PIK- and drought-reduced 1983 crop.

Across the major rice-producing States, the gains in yield, area, and production were varied:

- Arkansas harvested rice area moved up 23 percent from 1983/84, to 1.13 million acres in 1984. Average yields climbed from less than 4,300 pounds an acre in 1983 to 4,450 pounds this year. Arkansas rice crop is expected to top 50 million cwt, up 28 percent from the 39 million cwt produced in 1983/84.
- Louisiana had the highest rate of increase in production and harvested area from a year ago. Harvested acres totaled 548,000, up 42 percent from 1983, and yields are expected to rebound 7 percent, from 3,820 pounds an acre in 1983 to 4,100 in 1984. Production is likely to be up almost 50 percent, at 22 million cwt compared with 14.7 million in 1983.
- California posted the second largest increase in harvested rice area from a year ago. It is expected to total 455,000 acres, up 34 percent from 1983. With yields estimated at 7,300 pounds per acre, California may harvest 33 million cwt of rice, up 44 percent from a year earlier.

- Mississippi's harvest is expected to increase 27 percent because of an increase in harvested area from 160,000 acres in 1983 to 195,000 in 1984. With an average yield of 4,200 pounds per acre, Mississippi's rice crop is expected to be more than 8 million cwt, compared with 6.4 million in 1983.
- Texas harvested area in 1984 is expected to total 418,000 acres, up 31 percent. Average yields per harvested acre are likely to be up sharply, from 4,340 pounds in 1983 to 4,800 pounds in 1984. A big 10-percent jump in yield and area means Texas will most likely harvest 20 million cwt of rice, 45 percent more than in 1983.

Despite the sizeable rebound in acreage from 1983/84, rice producers could have planted more area. In Arkansas, planted area by participants and nonparticipants could have reached 1.28 million acres, assuming full compliance of enrolled area and base planted by nonparticipants. Using the estimates of harvested acreage, Arkansas producers underplanted by about 145,000 acres in 1984.* Underplanted area is estimated at 109,000 acres in California; 38,000 in Louisiana; 107,000 in Mississippi; and 78,000 in Texas. A number of factors can contribute to underplanting: The reported base acreage could include marginally productive land. In addition, rice producers who comply with program provisions may have to reduce acreage by slightly more than the required 25 percent because of the physical constraints posed by levee construction around fields. On the other hand, nonparticipants may expand planted area of alternative crops, such as soybeans or cotton, if competing returns appear more favorable than rice. This is especially likely in Arkansas, where harvested soybean acres outnumber rice by a ratio of nearly 4 to 1 in 1984. Finally, some producers may stop producing rice altogether because of acute financial problems or bad weather.

Out of the total 2.796 million acres harvested for the 1984 crop, 2.1 million are expected to be long grain rice, or about 75 percent of the total.

August 1, 1984, Rice Stocks Total A Third Less Than Year Earlier

Rice stocks on August 1, 1984, totaled 46.9 million cwt, about 34 percent less than a year earlier. Long grain whole kernel stocks totaled 16.4 million cwt, 35 percent of the total rough-equivalent stocks. Medium whole grain stocks totaled 26.2 million cwt, or about 56 percent of the total. Short grain and broken kernels claimed the remaining 4.3 million cwt.

Altogether, 49 percent of the total stocks on August 1 were in California, 22.6 million cwt. Nearly all of the California rice stocks are medium grain rice, approximately 20 out of 23 million cwt. Elsewhere, stocks in Arkansas totaled 12.4 million cwt (26 percent of the total stocks), and in Texas, 4.1 million, or about 9 percent of all stocks.

* Underplanted area, as used here, refers only to enrolled base acres. Underplantings could be larger, if unenrolled area was planted to rice.

Little Improvement Expected For 1984/85 Disappearance

Total supplies for the 1984/85 season are expected to be about 184 million cwt, just 12 million greater than 1983/84 supplies. But the 1984/85 season is expected to be more of the same for domestic use and exports. Like the past 2 seasons, U.S. rice exports will remain sluggish, hovering between 65 and 70 million cwt. Domestic use may reach 55 million cwt as brewers increase rice used a modest 5 percent, and food consumption increases to 38 million cwt. With total disappearance, including a residual, of 130 million cwt, season average farm prices are expected to show no improvement from 1983's estimated average of \$8.50 per cwt.

Supply and Disappearance by Type Point To Higher Long Grain Carryover in 1984/85

Long grain area and yields are expected to increase significantly from 1983/84. Long grain area may account for almost three-fourths of the total harvested rice area, compared with 72 percent in 1983, and an average of about 65 percent for the late 1970's. Moreover, while harvested medium and short grain acreage may increase 17 percent, or about 100,000 acres in 1984, long grain harvested area—at 2.1 million acres—is likely to be 35 percent higher than the 1.56 million harvested in 1983.

Long grain yields are also expected to rise in 1984. In part, good weather is responsible for much of the rebound in yields from 1983. But new, high-yielding varieties (HYV's) of semi-dwarf long grain rice are also a factor in boosting average yields. From just 80,000 acres in Texas, producers are reporting first-crop yields of 6,000 to 6,500 pounds an acre with the newly released Lemont variety of long grain rice. The success with Lemont may mean that Lemont replaces Labelle and Lebonnet as the predominant variety planted in Texas. With average long grain yields expected to rise to 4,450 pounds per acre, total supplies of long grain in 1984/85 may be 111 million cwt, up more than a fifth from the previous year.

But supplies of medium and short grain are likely to drop in 1984/85 compared with 1983/84. A lower carryin and only modest (compared with long grain) increases in production could mean these rice supplies total only 72 million cwt, down almost 10 percent from 1983/84.

Breaking down domestic use and exports by type, long grain carryover could easily approach 30 million cwt, exceeding medium and short grain carryover by a substantial amount for the first time since 1980/81.

This supply and use by type has implications for long grain prices. If the trend toward semi-dwarf, HYV's of long grain continues, and if total supplies of rice continue to shift in favor of long grain, prices will very likely soften. Farmers who adopt the new rice varieties will benefit even if long grain prices decline somewhat, since the yield increases promise sizeable economies of scale and should lower per unit costs of production. But this outlook could also mean more long grain rice is taken over by the Commodity Credit Corporation (CCC) if prices fall below the average loan received for long grain rice. Farm prices for long grain rice in 1984/85 are forecast in the range of \$8.65 to \$9.65 per cwt, while medium

and short grain prices are projected in the range of \$6.45 to \$7.45. Lower medium and short grain prices reflect the lower loan rates available for 1984-crop rice.

RECAPING 1983/84

There was only a modest price response in 1983/84 relative to the sizeable changes in area, production, and supplies.

Producers reduced harvested area by 1.1 million acres; yields declined by an average of 112 pounds per acre; and production plunged 35 percent. Prospects, at the beginning of the 1983/84 season, for a 50-percent cut in carryover were prevalent; although the carryover did not fall by half, on July 31, 1984, it was still a significant 34-percent drop from a year earlier, 47 million cwt compared with 72 million the previous July 31. Yet, farm

**Table 1.—Estimated supply and disappearance,
by type of rice**

Item	Unit	1982/83	1983/84	1984/85
Total rice				
Area harvested	Mil. acres	3.262	2.169	2.796
Yield	Pounds	4,710	4,598	4,880
Carryin ¹	Mil. cwt	49.0	71.5	46.9
Production	Do.	153.6	99.7	136.4
Total Supply ²	Do.	203.3	171.9	184.5
Domestic Use	Do.	54.0	50.1	55.0
Exports	Do.	68.9	71.1	68.0
Residual	Do.	8.9	3.8	7.0
Total Use	Do.	131.8	125.0	130.0
Carryover ¹	Do.	71.5	46.9	54.5
CCC	Do.	22.3	25.0	32.5
Free	Do.	49.2	21.9	22.0
Season average price	Dol./cwt	8.11	8.50	8.00-9.00
Long				
Area harvested	Mil. acres	2.175	1.560	2.106
Yield	Pounds	4,293	4,169	4,450
Carryin ¹	Mil. cwt	17.6	25.8	16.4
Production	Do.	93.4	65.0	93.9
Total supply ²	Do.	111.5	91.4	111.2
Domestic use ³	Do.	38.7	30.1	37.0
Exports	Do.	47.0	44.8	45.0
Total Use	Do.	85.7	74.9	82.0
Carryover ¹	Do.	25.8	16.4	29.2
Season average price	Dol./cwt	8.74	9.00	8.65-9.65
Medium/short				
Area harvested	Mil. acres	1.087	.609	.690
Yield	Pounds	5,539	5,696	6,160
Carryin ¹	Mil. cwt	30.2	44.7	28.8
Production	Do.	60.2	34.7	42.5
Total supply ²	Do.	90.6	79.6	71.5
Domestic use ³	Do.	24.2	24.6	25.0
Exports	Do.	21.9	25.4	23.0
Total Use	Do.	46.1	50.1	48.0
Carryover ¹	Do.	44.7	28.8	23.5
Season average price	Dol./cwt	7.09	7.50	6.45-7.45

Numbers may not add due to rounding. ¹Stocks of total rice include broken kernels, which are not included in the breakdowns of rice by type. Thus, the sum of long and medium/short grain rice carryover will not add to the total carryover; the difference is stocks of broken.

²Supply includes imports. ³Domestic use includes residuals.

prices throughout the season remained sluggish. The preliminary estimate for the season average indicates only a 5-percent improvement from 1982/83.

1983/84 Domestic Use Drops; Exports Increase

Total domestic disappearance of rice declined for the third consecutive year in 1983/84. Domestic use of rice—including food, seed, and brewers' use—fell to 50 million cwt, compared with 54 million in 1982/83. Use by brewers did an about-face, dropping 8 percent to 12.4 million cwt, compared with 13.5 million in 1982/83. Slower growth in per capita beer consumption along with a drawdown in brewers' rice inventories were largely responsible for brewers' slack demand for rice. Seed use—at 3.9 million cwt—was up moderately, reflecting an increase in planted area for the 1984 crop. The largest decline was food use, off 9 percent from 1982/83. Food use of rice, calculated as a residual use component, totaled 33 million cwt in 1983/84 compared with 37 million cwt a year earlier.

But U.S. rice exports rose an estimated 2 percent from 1982/83 to 1983/84, reaching 70 million cwt. Approximately 64 percent, or almost 45 million cwt, of these were long grain rice exports. Brown rice exports totaled about 10.3 million cwt, and exports of parboiled rice reached 25 million. Rough rice exports totaled more than 3 million cwt. The average price for U.S. No.2, 4-percent long grain milled rice (quoted at Rotterdam during the 1983/84 season) was \$527 per metric ton, or about \$24 per cwt. Average trade prices for all rice during 1983/84 were up 2 percent from 1982/83, but 17 percent less than average prices received during the record export year of 1980/81.

While U.S. prices for good-quality long grain (c.i.f. Rotterdam) remained above \$500 a metric ton throughout the season, prices for comparable Thai rice at Rotterdam averaged \$200 a ton less than U.S. prices. The U.S.-Thai price differential has widened considerably since 1980/81, when there was just a \$70 difference between comparable U.S. and Thai rice prices.

1983 Program Participation Boosts Rice Farmers' Net Returns

Like other grain producers, U.S. rice farmers have seen better days for farm prices. An appreciating U.S. dollar and loan rates above world market prices have effectively taxed grain exports to foreign consumers. Although U.S. farmers see their commodities earning a low price relative to earlier years, many foreign customers are paying higher prices for U.S. commodities because they must use more of their own currency to pay the U.S. price.

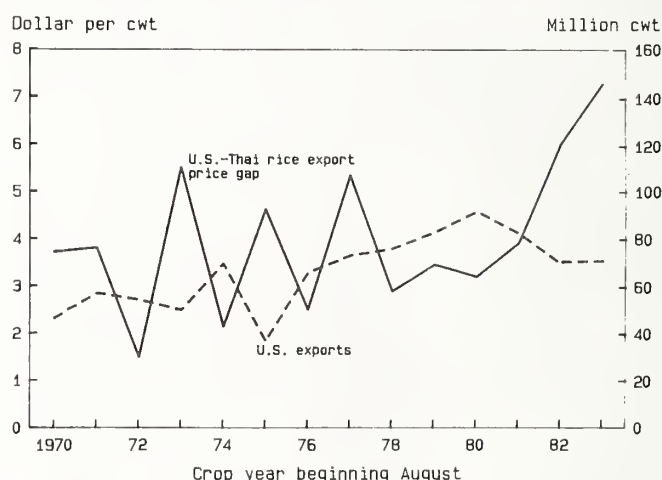
But even though farm prices for rice have declined in the past few years, program participants have escaped some of the effect of declining prices because the share of farm income contributed by Government payments has increased. Direct Government payments as a share of the total farm value of rice produced have risen from less than 16 percent in 1976/77 to 73 percent in 1983/84. As a share of net returns (defined here as cash receipts less cash expenses), direct Government payments were 37 percent in 1976/77, but they rose to 87 percent in 1983/84. In 1982/83, program participants received an

average of \$1.75 per cwt more for rice harvested than nonparticipants; in 1983/84, because of direct payments and PIK, program participants fared better than nonparticipants by an average of \$6.26 per cwt.

For the 1984/85 season, direct Government payments are likely to decline, with no paid land diversion or PIK program. Based on the midpoint of the USDA forecast price range for 1984/85 and assuming cash expenses per acre approximating 1983 levels, U.S. rice producers may realize a total farm value of \$1.16 billion and cash expenses totaling approximately \$1 billion. But direct payments from the 1984 rice program could boost producers' cash returns to \$500 million, or about \$3 per cwt more for program participants. Direct payments as a share of expected farm value in 1984/85 could decline from 73 percent in 1983/84 to about 30 percent.

Figure 1

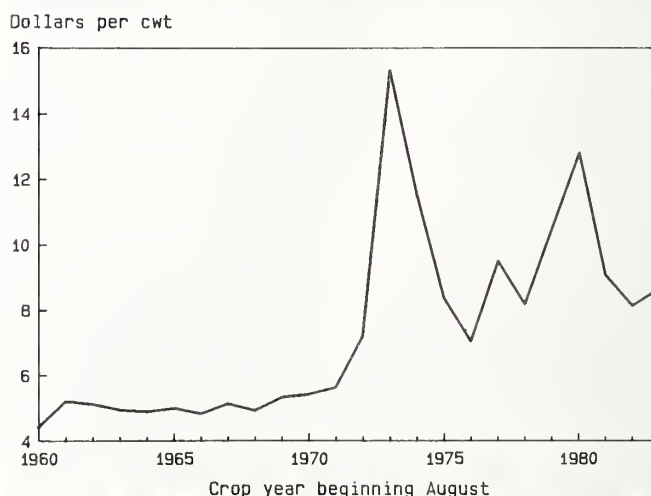
U.S.-Thai Rice Export Price Gap and U.S. Rice Exports *



* U.S. exports are on a rough-equivalent basis.

Figure 2

U.S. Rough Farm Price



Furthermore, rice producers have received higher returns than producers of other grains and cotton. Comparing national average net returns per planted acre for rice, other grains, and cotton (from 1978 through 1983), the relative economic advantage of rice production is evident. In 1978, average net returns per planted acre of rice, measured in current dollars, were \$158. Measured in 1972 (deflated) dollars, net returns per planted acre of rice were \$105. Comparing rice with other crops (wheat, corn, or sorghum), rice producers realized a relative advantage (in current dollars) of more than \$100 per acre. Comparing rice with soybeans or cotton, rice producers would have received \$40 to \$50 more per planted acre in 1978.

The relative advantage of rice over alternatives did not maintain the 1978 margins, however. In 1981, current dollar returns per planted acre of rice fell substantially, to \$92, from 1980's level of \$238. In 1972 dollars, the drop in net returns was magnified. From \$133 per planted acre in 1980, deflated returns plunged 65 percent, to \$47 per acre in 1981. Rice lost much of its comparative advantage with other crops. Compared with wheat, the

Table 2.—U.S. average net returns¹ per planted acre, selected crops, 1978-83

Crop	1978	1979	1980	1981	1982	1983
<i>Dollars per planted acre</i>						
Rice	158	225	238	92	106	329
Wheat	41	53	46	39	36	64
Corn	57	117	96	70	98	146
Sorghum	52	64	41	59	49	68
Soybeans	117	112	97	72	71	98
Cotton	106	155	112	139	98	225
<i>1972 dollars per planted acre</i>						
Rice	105	138	133	47	51	153
Wheat	27	32	26	20	17	30
Corn	38	72	54	36	47	68
Sorghum	35	39	23	30	24	32
Soybeans	77	69	54	37	34	45
Cotton	70	95	63	71	47	104

¹Net returns are the difference between cash receipts and cash expenses. Cash receipts include market value (farm production times season average price), and Government payments made directly to farmers. Cash expenses include cash variable and fixed expenses. Costs for 1980-82 were taken from Economic Indicators of the Farm Sector: Cost of Production, 1982. NED, ERS, USDA, ECIFS 2-3, December 1983. Costs for other years were indexed using 1980-82 as a base. Net returns are computed on the basis of U.S. average figures; no regional comparisons were made.

Table 3.—Relative advantage of rice over alternative crops, 1978-83

Crop	1978	1979	1980	1981	1982	1983
<i>Dollars per planted acre</i>						
Wheat	117	172	192	53	70	265
Corn	101	108	142	22	8	183
Sorghum	106	161	197	33	57	261
Soybeans	41	113	141	20	35	231
Cotton	52	70	126	(47)	8	104
<i>1972 dollars per planted acre</i>						
Wheat	78	106	107	27	34	123
Corn	67	66	79	11	4	85
Sorghum	70	99	110	17	27	121
Soybeans	28	69	79	10	17	108
Cotton	35	43	70	(24)	4	49

relative advantage of rice declined from \$192 per planted acre in 1980 to \$53 in 1981. In fact, cotton was comparatively more profitable to produce in 1981 than rice: cotton yielded \$47 more per acre than rice.

By 1983, however, rice regained a strong margin over cotton and other grains. In part because rice had the highest program enrollment of any crop under the PIK program provisions, net returns per planted acre of rice rose to \$329, or \$153 measured in 1972 dollars. An acre planted to rice in 1983 returned \$265 more than wheat, \$183 more than corn, \$261 more than sorghum, \$231 more than soybeans, and \$104 more than cotton.

The effect of the rice program on net returns is evident when returns per planted acre are compared from 1980 to 1983. In 1980, season average farm prices for rice were \$12.80 per cwt, and net returns per planted acre were estimated at \$238. That season was a record year for rice exports. By 1981, exports had slid 10 percent; acreage and yields posted record levels; and farm prices began their 3-year decline, dropping 30 percent to a season average of \$9.05 per cwt. Inflation was still high by several measures: the GNP deflator rose 9.2 percent; the index of prices paid by farmers rose 9 percent; and the Consumer Price Index (CPI) also increased 9.6 percent from 1980. Returns per planted acre of rice dropped more than 60 percent, to \$92 per acre. But though farm prices and exports continued to decline into 1982 and only marginally increased in 1983, net returns per planted acre of rice began to increase after 1981 because Government payments absorbed an increasing share of rice producers' cash receipts. In 1982, when farm prices averaged 10 percent less than the previous year and exports dropped another 16 percent from 1981, net returns per planted acre increased 15 percent. The 1983 rice program helped boost net returns per planted acre to over \$300, more than double the previous year's returns. Thus, the rice program has been effective in providing income protection during periods of declining prices and weak demand.

1985 Rice Program Announced Early

The 1985 rice program requires producers to reduce planted base acreage by a total of 35 percent to comply with a 20-percent acreage reduction program (ARP) and a 15-percent cash land diversion (CLD). Participants will be eligible for a target and loan rate frozen at the 1984/85 level—\$11.90 per cwt for the target price, a loan rate of \$8, and a diversion payment rate of \$3.50. The program provisions are part of the Agricultural Programs Adjustment Act of 1984, which mandates a combined minimum 20- and 5-percent ARP/CLD if carryover is anticipated in excess of 25 million cwt. Any further reduction in planted area announced by the Secretary would have to come as a result of an increase in the CLD provision of the program. Since carryover on July 31, 1985, is expected to exceed 42.5 million cwt, the diversion payment rate is scheduled at \$3.50 per cwt. A carryover between 35 and 42.5 million cwt would have meant a diversion payment rate of \$3.25. The weak outlook for demand, attractive program features (including advanced deficiency and diversion payments), and the promise of higher yields will most likely elicit strong participation in the 1985 rice program.

GLOBAL ECONOMIC OUTLOOK

Asian Economic Growth Rate May Match U.S. Pace

The pace of the U.S. recovery is still strong, based on the most recent economic indicators. Inflation is not expected to increase significantly through the remainder of 1984 or into 1985. For fiscal 1984, economic growth is forecast at 6 percent. Strong foreign competition and improved labor productivity have helped mitigate concerns over renewed inflation. Comparatively high U.S. interest rates and more attractive investment opportunities have promoted foreign investment in dollar assets; this change in interest rates and income tax has also supported appreciation of the U.S. dollar against major foreign currencies.

The international economic outlook continues to improve as well. Overall recovery rates for foreign countries are still varied, however. Estimated at 2 percent in 1984, European growth rates continue to lag far behind the United States, Canada, and Japan.

Despite some hopes for improvements in debt-ridden developing countries, the outlook for economic growth rates in Africa and parts of Latin America remain uncertain. But economic recovery in Asia has picked up momentum, and is expected to match the U.S. pace. By shifting their emphasis to exports, Taiwan, Hong Kong, and South Korea have been able to generate high levels of trade. This year, Asia replaced Western Europe as the major U.S. regional trading partner. Since 1981, Asia has been the major market for U.S. farm products. In fiscal 1984, U.S. agricultural exports to Asia may be almost 60 percent larger than to Western Europe.

WORLD RICE OUTLOOK

World rice production continues to set records in 1984/85. Forecast at 452 million metric tons (rough basis), the 1984/85 world rice crop is expected to exceed the 1983/84 record by 1 percent. Global consumption of milled rice is also forecast to rise, from 305 million metric tons in 1983/84 to 308 million in 1984/85. The 1-percent boost in consumption is offset by higher output, leaving carryover almost unchanged at 16.8 million tons, compared with 16.9 million at the end of 1983/84.

Nearly half of the increase in global production is expected to be from the rebound in U.S. production, but foreign consumption is expected to rise 1 percent. Thus, although U.S. carryover at the end of 1984/85 is expected to increase, foreign stocks will most likely be drawn down from 15.4 to 15.0 million metric tons.

Larger Crops of Major Importers May Reduce Demand in 1985

Expected larger crops from a number of major importing countries in 1984/85 is likely to reduce total rice import demand in 1985.

Indonesia is expected to delay or cancel scheduled imports through the latter part of 1984 because of good weather as well as large stocks (a lack of adequate storage for the scheduled imports is reportedly responsible for the delay). Estimates for 1984 rice imports by

Indonesia have been reduced to 500,000 tons from previous estimates of 700,000 tons. In 1985, however, Indonesia may import 800,000 tons as storage space becomes available. Rice accounts for about 50 percent of daily caloric intake in Indonesia, making rice the primary food staple. Although imports of 1.2 million tons of rice made Indonesia the world's leading importer in 1983, Indonesia has made remarkable strides in rice production over the past 2 decades. Intensified efforts have centered on credit, improved seed quality, fertilizer and chemical inputs, irrigation, and farmer training programs. Rice programs in Indonesia have been broadened in recent years to reduce the inflexibility characteristic of earlier programs and to provide local areas with more autonomy in production and planning decisions. Currently, Indonesia employs a rice program which permits groups of up to 50 farmers to make collective decisions about production (including land preparation, planting, spraying, and harvesting). The current program reflects efforts to improve the management and financial capability of individual farmers within a group.

An unexpected drop in rice stocks has resulted in the Philippine Government's importing rice for the first time since 1977. Imports during 1984 are projected at 180,000 tons, already purchased from China and Thailand. However, the Government claims traders and farmers are continuing to withhold supplies from the market. Problems in the Philippine rice sector follow disappointments elsewhere in the Philippine economy, which has been plagued by threats of financial insolvency, currency devaluations, and a widening trade deficit. Rice farmers encountered setbacks including expensive credit and higher input costs. The Philippine Government raised the support price to reflect higher production costs, but private traders have been offering better prices, making it difficult for the Government buying agency to rebuild low stocks. The 180,000-ton purchase will be sufficient until the new crop is harvested this fall, but if Government claims about withholding are true, additional imports of rice may be necessary.

Low levels of rice stocks in India could result in continued heavy imports in 1985, unless 1984/85 production matches output in 1983/84 (almost 89 million metric tons). Monsoon activity on the Indian subcontinent declined during the end of July, leaving most of India with below-normal rainfall. However, eastern parts of India were hit by flooding. Overall, weather during the first half of the season compared favorably with 1983/84's, when a record rice crop was harvested. For 1984/85, the Indian rice crop is forecast at 86 million tons, 3 percent less than 1983/84. Milled imports during 1985 are forecast at 500,000 tons, down measurably from the 800,000 tons projected for 1984, but still significant compared with previous years.

Like eastern India, Bangladesh also suffered heavy flooding, damaging the 1984/85 rice crop. Reportedly, 700,000 to 900,000 tons of rice may have been lost. But Bangladesh may be able to recover some of the loss with a good crop later in the season, pending improving weather. Imports in 1984 are projected at 650,000 tons, dropping to 400,000 in 1985.

Earlier expectations that Vietnam might be a significant rice exporter in 1984 were discarded when a smaller-than-expected 1983/84 rice crop reduced export availabil-

ity. The smaller crop also was a factor in boosting rice imports above earlier projections. For 1984, Vietnam may import 150,000 tons of milled rice; this is expected to decline to 100,000 tons in 1985.

Export Availability Declines in Thailand; Up in Burma and China

A smaller rice crop forecast for Thailand could mean a slight decline in export availability for 1985. Thailand's rice harvest in 1984/85 is forecast at 18.5 million tons, compared with a record 18.8 million tons in 1983/84. Thai exports are likely to be a record in 1984, exceeding 4.2 million metric tons. However, the decline in production means that Thai exports could shrink slightly in 1985, dropping to 4 million tons.

Japan is forecast to drop out of the rice export market altogether in 1985, after exporting 100,000 tons in 1984. Likewise, exports from Pakistan are forecast to drop from the 1.3 million tons estimated for 1984 to 1.1 million tons in 1985. But rice exports from Burma and China will offset part of the decline in Japan and Pakistan.

Rice exports by Burma, estimated at 850,000 tons in 1984, are forecast at 900,000 tons in 1985. Within Southeast Asia, Burma may emerge as a major U.S. rice competitor during the next decade. The Burmese Government has plans to shift land, currently considered marginal for rice production, into other crops. The Government also projects that by the 1990's, planting of HYV's may exceed 75 percent, up 15 percent from 1980. If this occurs, Burma should realize greater yields and production, promising a larger exportable surplus. If current constraints on transportation, handling, and storage can be alleviated, Burma may be exporting 1.5 to 2 million tons of rice by the early part of the next decade.

Burma has long been saddled with problems of market acceptance because of low-quality rice exports. But plans to improve milling facilities as well as production should help improve rice quality and offer opportunities to export rice to the Middle East and Europe. In 1983, Burma's agricultural sector showed strong growth, aided largely by the Government's rice production program. The program focuses on major rice-producing townships for introduction and adoption of a high-yielding, techno-

logical rice package with improved seeds, greater availability of inputs, and efficient management. Local government participation in production and procurement decisions, local community mobilization to provide additional labor, and priority allocations of consumer goods to supplement income have all served as major factors insuring adoption of high-yield technology.

In China, export activity is forecast to remain high after 2 consecutive years of increase. Chinese exports may reach 600,000 tons in 1985, matching 1984's level.

Altogether, exports by Burma, Japan, Thailand, Pakistan, and China are estimated at 7.1 million tons in 1984, but their volume may fall 6 percent, to 6.6 million tons in 1985.

Supply/Demand Conditions Expected To Tighten in 1985

Import needs of Bangladesh, India, Indonesia, Japan, and the Philippines are likely to be the key factors in the pace and volume of 1985 rice trade. World rice trade in 1985 is forecast at 11.9 million tons, down 4 percent from the 12.4 million tons estimated for 1984.

Growing conditions in Japan and the Philippines have been good thus far, but with reduced stocks, crops in these two countries will have to be very good to avert additional pressure for more imports. However, some pressure on world imports is likely to be reduced because of fine weather and stock levels in Indonesia. Bangladesh is expected to continue heavy buying in 1985, but imports could go higher if the late crop fails to meet expectations. And, although India's 1984/85 rice crop is expected to be good, rebuilding stocks will require either additional rice imports or a harvest matching the 1983/84 record output.

Prospects for U.S. rice trade in 1985 remain uncertain. At the present, little improvement is expected, but a tighter world supply/demand situation could change this outlook. Continued heavy demand by India and Bangladesh, coupled with the possibility of additional imports by Japan and the Philippines, could exert pressure on Asian rice supplies. If so, the United States could see some opportunities arising for rice exports to Europe and the Middle East.

Thailand's Rice Export Potential

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Abstract: In recent years, Thailand's share of world rice exports has increased to over 30 percent, after stagnating production in the early 1970's caused Thailand's share of trade to decline. An exportable surplus of rice grew as Thailand's per capita intake declined and improved irrigation systems reversed the downtrend in average yields. Future growth will rely more on productivity gains than area expansion. Yields, which are low, could rise substantially, leading to milled rice production of over 13 million tons by 1990 and more than 14 million tons by 1995.

Keywords: Thailand, rice, exports, price policy, export policy, competition, projections.

Trends in Production

Over the last 2 decades, Thailand's agriculture has changed from one dominated by rice to a more diversified agriculture featuring export-oriented crops such as rubber, corn, cassava, sugarcane, and pineapples in addition to rice. The contribution of rice to the total value of agricultural output has fallen from 53 percent in 1960 to 33 percent in 1983, but rice remains the major crop and leading export. Despite this diversification to other export crops, the area devoted to rice has continued to expand and currently occupies about 60 percent of total farmland.

Largely because of this area growth, rice production rose by 2.5 percent annually during the 1960-75 period. In the early 1970's, production stagnated because of a considerable slowing in productivity growth, but the expansion and rehabilitation of irrigation systems in the central region led to a surge in both area and yields by the late 1970's. However, the increasing use of marginal and rainfed lands in the Northeast region has prevented stronger growth in yields, and average yields in Thailand are among the world's lowest.

Inadequate water control is a key constraint to the achievement of productivity gains through farmer adoption of high-yielding variety (HYV) seeds and fertilizer. Poor water control for the main, wet-season crop (only one-fourth of the main crop is irrigated) makes the cultivation of relatively input-intensive HYV seeds more risky than traditional varieties. In contrast, at least 75 percent of the dry-season rice crop is irrigated, leading to yields that are double those of the main crop because of greater use of HYV seeds and fertilizer. During the 1974-82 period, fertilizer use on the dry-season crop was roughly eight times per hectare that applied on the main crop. While the bulk of Thailand's rice production continues to come from the main crop, relatively stronger growth in the yields of the dry season crop has caused this crop now to account for over 10 percent of total output, compared with 7 percent in 1970.

For the average farmer, early season rainfall is the main determinant of how much area is planted to rice.

Although minimum support prices are set each season, they have been met in only one of the last 10 years and appear to have little bearing on farmers' planting decisions during the wet season. At the onset of the dry season, however, relative farmgate prices (between rice, corn, sugarcane, and cotton) and availability of irrigation water are key factors. For the Government, efforts to boost rice production focus primarily on construction of road and irrigation facilities and investment in rice research. The Government continues to rely on the private sector to provide other essential initiatives and services, including transportation, grading, storage, machinery, inputs, and financing.

Thai Rice Exports Expand

The share of Thailand's rice crop exported has fluctuated from 23 percent in the early 1960's to 14 percent in the early 1970's and rebounded to about 30 percent in the last several years. At the same time, Thailand's share of world rice exports has followed a similar pattern, accounting for 30 percent in 1983. In part, this has been possible because Thailand's per capita rice consumption, while still among the world's highest at about 160 kgs, appears to be declining.

Thailand exports roughly 13 grades of rice, including high to medium quality white rice (ranging from 100 percent non-broken to 25 percent broken); lower quality broken rice; glutinous rice; cargo (brown) rice; and parboiled rice. Export demand for each grade has varied over time, yet, in recent years, the following grades accounted for over 80 percent of exports (1979-81 share in parentheses): white rice 100-percent (25 percent), white rice 10-percent (15 percent), white rice 25-percent (13.5 percent), A-1 broken (15 percent), and parboiled (14 percent). Asian markets have been the destination for 35 percent of all exports in the last several years. The Middle East—largely Saudi Arabia, Syria, and, intermittently, Iran and Iraq—has increased its share of Thai exports, mostly high quality rice, from 2 percent in 1970 to 19 percent in 1983. Thailand has also performed well in the price-sensitive African market, enlarging its exports to that region from 111,000 tons in 1970 to 1.3 million tons in 1983.

Export Policies

Given its substantial exportable surplus, Thailand has broadened its export horizons through competitive pricing, trade missions, export financing, and flexible marketing arrangements. Adjustments in various Government taxes on the export (f.o.b.) prices have been a major factor in the price competitiveness of Thailand's rice exports since 1966. Previously, the world price of rice was relatively stable, and the purpose of Government intervention in rice marketing was to raise revenues using export taxes. As the rice sector has declined in relative importance, both within the overall farm sector and as a source of Government revenue, the primary aim of adjustments in rice export taxes now is to keep domestic prices relatively low and stable. Because of rice's importance in the Thai diet, an acceptable rice price, particularly for urban consumers, is politically important. Thus, rising domestic prices prompt the Government to boost domestic supplies by increasing export taxes until Thai rice is no longer competitive for export. And when local prices are low and exportable surpluses exist, the taxes are lowered to stimulate exports. This policy has tended to protect urban consumers from high domestic and world rice prices, while exposing farmers to low farm prices. Studies done by Thailand's National Economic and Social Development Board indicate that less than 20 percent of the total tax on rice exports is borne by foreign buyers, with the balance shouldered by Thai farmers.

Recognizing that export tax policies have depressed farm prices, the Government has allocated a portion of the tax revenues to subsidize fertilizer. However, administrative difficulties have prevented the program from reducing domestic fertilizer prices, and fertilizer use remains below 55 kgs per hectare (about 50 pounds per acre). Despite the consumer-orientation of the export tax policy, other studies suggest that the tax policy has not provided substantial disincentives to increase rice production for several reasons. First, until the early 1970's, area and output expanded readily, despite low prices, in order to meet subsistence requirements. Second, adoption of HYV's and the expansion of irrigation facilities by the late 1970's boosted yield potential and offset the need for stronger producer prices. Third, domestic rice prices have not been completely insulated from the world

market and have increased somewhat since the late 1960's. In addition, although detailed cost of production data are not published by the Thai Government, it is generally believed that farmers are willing to accept low returns on their land and labor input.

Thailand has also capitalized on both its exportable surplus and its reputation as a reliable supplier of both high and low quality rice by sending Government-sponsored trade missions abroad and offering flexible marketing arrangements. Marketing tools include the options for either private or government-to-government sales, the ability to deliver small shipments, and an increasing willingness to extend credit. Credit offered through the Bank of Thailand's rediscount facility resembles export credits; however, it is not clear that there are direct or indirect subsidies on rice exports. While Thailand most likely has a transportation advantage over the United States for deliveries in Asia, Thailand's exports to destinations outside Asia have shown strong growth recently. Examples of increasing competition between the United States and Thailand in the world rice market can be seen in Africa, the Middle East, and even the European Community (EC).

Figure 3

Thai Rice Production and Disappearance

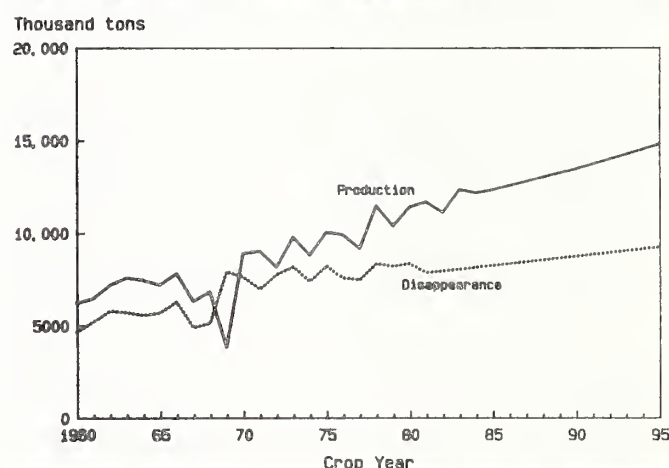


Table 4.—Supply and distribution of milled rice in Thailand

Year	Beginning stocks	Pro- duction ¹	Imports	Exports	Domestic disappearance			Ending stocks
					Food	Feed	Total	
1,000 tons								
1970	1,697	8,851	—	1,064	7,478	485	7,963	1,521
1975	1,279	8,835	—	933	6,905	520	7,425	1,756
1980	1,681	10,400	—	2,700	7,690	560	8,250	1,131
1981	1,131	11,463	—	3,049	7,820	580	8,400	1,145
1982	1,145	11,732	—	3,620	7,307	600	7,907	1,350
1983	1,350	11,139	—	3,700	7,550	450	8,000	789
1984 prel.	789	12,421	—	4,250	7,600	500	8,200	760
1990 proj.	1,289	13,294	—	4,579	8,699	—	8,699	1,305
1995	1,363	14,577	—	5,374	9,188	—	9,188	1,378

¹ Production allocated as follows: 1970 crop includes main crop harvested during November 1969–February 1970 and second crop harvested during June–August 1970.

Sources: Ministry of Agriculture and Cooperatives, Thailand and USDA estimates.

- In Nigeria, U.S. rice exports accounted for 59 percent, or 402,000 tons, of its market in 1981 and 54 percent, or 358,000 tons, in 1982. The U.S. share dropped to only 17 percent (124,000 tons) in 1983, and is projected to fall to just 13 percent of Nigeria's market in 1984. Conversely, Thai exports grew from 198,000 tons in 1981 to 488,000 tons in 1983, and there is a 510,000-ton commitment so far in 1984.
- As oil prices declined, Nigeria (a net-exporter of oil) faced a foreign exchange shortage and was compelled to be more price-discerning than in the past, making Thai rice more attractive. Government-to-government sales arrangements have provided further marketing advantage for Thai rice since Nigeria has stated a preference for maintaining large rice imports while reducing costs under government-to-government contracts.
- The Ivory Coast is another example of successful Thai marketing. In 1977, U.S. rice exports to the Ivory Coast began climbing but have dropped off recently to about 29,000 tons, while Thai exports moved from zero in 1980 to an average of 127,000 tons between 1981 and 1983.
- Iranian and Syrian markets have also turned to Thai rice supplies; yet, noneconomic reasons are as important as price. Iraq is predominantly a U.S. rice market, but has historically been a strong buyer of Thai rice. The extension of U.S. credit to Iraq has helped the United States maintain this market.
- The EC is a growing Thai market, with Thai exports rising from 16,300 tons in 1970 to 129,700 tons in 1983 (a record 252,000 tons were shipped in 1982).

Still, the United States dominates the EC rice markets, shipping 189,000 tons in 1970 and 387,000 tons in 1983.

Projections for Thai Rice Exports

Projections of Thailand's rice supply, demand, and exports through 1995/96 are provided in table 4. Supply projections are based on various resource and productivity assumptions, as well as constant world prices and average weather. The supply estimates are combined with domestic demand projections, based on assumed rates of income and population growth, to develop projections of export potential. The projections indicate that Thailand's milled rice production could increase to over 13 million tons by 1990, with an exportable surplus of about 4.5 million tons. By 1995/96 exports could climb to over 5 million tons, if production continues to rise, and growth in domestic use continues to slow.

In Thailand, future production growth will inevitably rely more on yield improvements than on area expansion. With most suitable land already planted to rice during the wet-season, area gains will very likely be confined to small increases in dry-season planting. Recent Government policy and budget priorities reflect a belief that greater returns will be realized from improving existing irrigation and water control systems than from expanding irrigated area. Projections of Thailand's production capacity assume only slight increases in area of 0.3 percent annually for the period 1985/86 to 1990/91 and further slowing to 0.1 percent annually for the period 1990/91 through 1995/96.

Yields, which are quite low, could rise substantially through improved water, pest, and weed control, and

Table 5.—Rice exports from Thailand by major destination

Country	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
1,000 tons														
Hong Kong	193	210	246	94	114	121	125	110	94	103	128	115	115	147
India	33	76	110	—	—	141	—	—	—	—	—	52	—	222
Indonesia	140	107	165	267	127	13	526	848	164	615	645	200	181	334
Iran	—	—	—	—	—	—	—	—	—	—	—	350	319	389
Iraq	—	18	10	—	81	—	43	76	74	97	53	—	—	—
Italy	—	1	4	—	—	1	—	3	2	26	43	27	32	54
Ivory Coast	—	—	59	—	—	—	—	13	—	—	—	157	136	87
Madagascar	—	10	19	5	14	12	49	—	—	—	—	21	269	124
Malaysia	118	105	103	29	74	19	119	203	157	101	154	237	388	307
Netherlands	6	18	38	29	8	8	7	8	8	9	71	31	24	46
Nigeria	—	—	—	—	—	—	46	278	483	198	197	198	186	488
PRC	—	—	—	—	—	30	114	—	—	71	18	211	320	47
Saudi Arabia	103	90	27	48	70	49	102	24	42	42	104	140	99	71
Senegal	—	149	200	78	20	28	111	67	61	229	327	226	309	271
Singapore	137	202	328	79	89	102	176	218	140	193	180	158	174	186
Syria	—	—	—	—	—	—	—	—	—	25	11	55	70	45
U.S.S.R.	—	—	—	—	20	11	—	—	—	61	204	277	40	—
Average export unit value (f.o.b. Bangkok)														
Baht/ton	2,366	1,846	2,101	4,235	9,500	6,152	4,359	4,543	6,488	5,575	6,968	8,697	5,949	5,760
Exchange rate Baht/\$	20.93	20.93	20.93	20.38	20.38	20.4	20.4	20.4	20.39	20.42	20.63	23.0	23.0	23.0
Average Export unit value (f.o.b.)														
\$/ton	113	88	100	208	466	302	214	223	318	273	338	378	259	250

Sources: Department of Customs, Thailand and Bank of Thailand.

Table 6.—Selected U.S. and Thai rice statistics

Crop year	Harvested area		Production ¹		Exports as share of production	
	Thailand	U.S.	Thailand	U.S.	Thailand	U.S.
	1,000 acres		1,000 tons		Percent	
1969/70	16,929	1,815	13,410	3,799	18	56
1974/75	18,555	2,818	13,386	5,826	11	44
1979/80	21,375	3,312	15,757	5,985	26	63
1980/81	22,477	3,312	17,368	6,629	27	63
1981/82	23,156	3,792	17,776	8,289	31	45
1982/83	23,131	3,262	16,877	6,967	33	45
1983/84	23,672	2,169	18,820	4,523	34	70
1984/85 Proj.	23,625	2,796	18,500	6,187	34	50

¹Rough rice production.

Sources: Ministry of Agriculture and Cooperatives, Thailand, and USDA estimates.

Table 7.—Deflated Thai prices, 100 percent No. 2 rice¹

	Farm	Wholesale	Export
		Baht/ton	
1970	N.A.	3,880	5,037
1975	2,187	4,080	7,966
1976	1,949	4,136	4,359
1977	1,715	3,879	4,213
1978	1,988	3,984	5,603
1979	1,696	3,734	4,329
1980	1,684	3,832	4,504
1981	1,818	4,000	7,357
1982	1,660	3,473	4,869

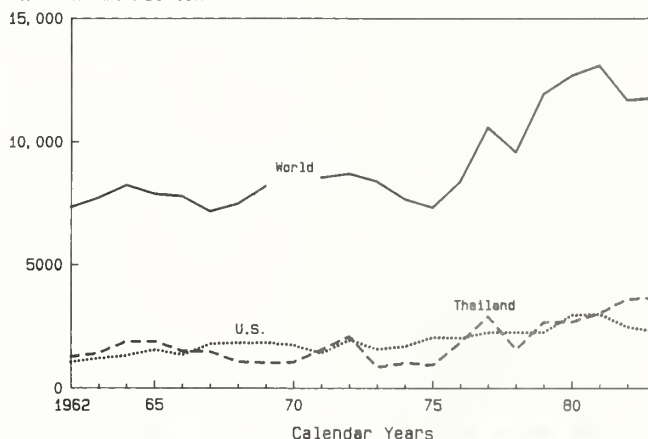
¹Deflated using wholesale price index, 1976 = 100.

Source: Ministry of Agriculture and Cooperatives, Thailand.

through greater use of fertilizers. Greater control of fertilizer quality and research on optimal levels of fertilizer use is needed, as well as increased promotion of low-cost, single-nutrient (such as urea) fertilizer rather than the more prevalent, high-cost, mixed fertilizers. The baseline assumes yields will grow by 1.5 percent through the latter part of the 1980's, with annual growth increasing to 1.75 percent in the early 1990's. Growth in both yield and production during the remainder of this decade will most strongly depend on the extent to which farmers receive stronger price signals and are thus able to justify greater input use. In 1982, Thailand's fertilizer/rice price ratio was the highest in Asia, inhibiting fertilizer use. But with economic growth and a continuing down-trend in per capita rice consumption, consumers' price sensitivity may ease, permitting the Government to focus more on producers' welfare.

Figure 4**U.S. and Thai Share of World Rice Exports**

Thousand metric tons



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Table 8.—Rice (rough equivalent): Supply, disappearance, area, and prices¹

Item	1981/82	1982/83	1983/84 ²	1984/85 ³
<i>Million cwt</i>				
Supply				
Beginning stocks, August 1	16.5	49.0	71.5	46.9
Production	182.7	153.6	99.7	136.4
Total ⁴	199.6	203.1	171.9	184.5
Disappearance				
Food ⁵	42.5	37.3	33.4	38.0
Seed	4.4	3.2	3.9	4.0
Brewers	12.7	13.5	12.4	13.0
Total domestic ⁶	68.6	62.9	54.7	62.0
Exports	82.0	68.9	70.3	68.0
Total	150.6	131.8	125.0	130.0
Ending stocks, July 31	49.0	71.5	46.9	54.5
<i>Million acres</i>				
Area				
Planted	3.83	3.29	2.19	2.85
Harvested	3.79	3.26	2.17	2.80
Allotment	1.80	1.80	—	—
<i>Pounds per acre</i>				
Yield per harvested acre	4,819	4,710	4,598	4,880
<i>Dollars per cwt</i>				
Prices				
Received by farmers	9.05	8.11	8.50	8.00-9.00
Loan rate	8.01	8.14	8.14	8.00
Target rate	10.68	10.85	11.40	11.90

¹Consolidated supply and disappearance of rough and milled rice. Milled-rice data converted to rough-rice basis using annually derived extraction rates as factors. ²Preliminary. ³Projected. ⁴Includes imports. ⁵Food use includes shipments to U.S. territories. ⁶Includes a residual.

Table 9.—Rough rice: Supply and disappearance¹

Item	Year beginning August 1		
	1981	1982	1983 ²
<i>1,000 cwt</i>			
Beginning stocks	9,840	41,387	63,157
Farm production	182,742	153,588	99,720
Supply	192,582	194,975	162,878
Domestic ³	145,510	131,244	119,934
Exports	5,785	574	3,238
Disappearance	151,195	131,818	123,172
Ending stocks, July 31	41,387	63,157	39,706

¹Includes supply and disappearance of rough rice only. ²Preliminary. ³Includes mill use, seed, and a residual.

Table 10.—Milled rice: Supply and disappearance¹

Item	Year beginning August 1		
	1981	1982	1983 ²
<i>1,000 cwt</i>			
Beginning stocks	4,855	5,477	5,896
Production	95,074	84,475	79,012
Imports	278	469	540
Supply	100,207	90,421	85,448
Food ³	30,702	26,413	23,753
Brewers' use	9,123	9,613	8,825
Exports	54,905	48,499	47,749
Disappearance	94,730	84,525	80,327
Ending stocks, July 31	5,477	5,896	5,121

¹Includes supply and disappearance of milled rice only. ²Preliminary. ³Includes shipments to U.S. territories.

Table 11.—Rice, rough: Acreage, yield, and production, by State

State	Acreage				Yield per harvested acre		Production	
	Planted		Harvested					
	1983	1984 ¹	1983	1984 ¹	1983	1984 ¹	1983	1984 ¹
	<i>1,000 acres</i>		<i>1,000 acres</i>		<i>Pounds</i>		<i>1,000 cwt</i>	
Arkansas	925	1,150	1,330	1,130	4,280	4,450	39,159	50,285
California	330	460	535	455	7,040	7,300	23,089	33,215
Louisiana	390	550	598	528	3,820	4,100	14,693	21,648
Mississippi	162	200	245	195	4,000	4,200	6,440	8,190
Missouri	63	71	80	70	4,090	4,350	2,534	3,045
Texas	320	420	474	418	4,340	4,800	13,805	20,064
United States	2,190	2,851	3,262	2,796	4,598	4,880	99,720	136,447

¹Preliminary.

Source: Crop Production, Crop Reporting Board, SRS, USDA.

Table 12.—Rice stocks: Rough and milled¹

Date	Rough					Milled			
	On farms or in farm ware-houses	At mills and in attached ware-houses	In ware-houses (not attached to mills)	In ports or in transit	Total all positions	At mills and in attached ware-houses	In ware-houses (not attached to mills)	In ports or in transit	Total all positions
	1,000 cwt								
January 1									
1979	28,089	16,829	50,100	899	95,917	3,517	542	2,080	6,139
1980	31,021	15,038	57,278	581	103,918	3,137	810	2,123	6,070
1981	26,179	21,111	48,817	6	96,113	3,055	929	2,556	6,540
1982	48,404	22,952	59,117	911	131,384	2,735	907	1,414	5,056
1983	34,551	24,151	76,070	200	134,972	2,960	858	2,401	6,219
1984	30,681	19,541	64,143	344	114,709	3,867	456	1,395	5,718
April 1									
1979	14,381	18,158	34,161	820	67,520	3,979	282	2,444	6,705
1980	12,030	15,581	39,224	563	67,398	3,500	402	2,888	6,790
1981	5,977	15,078	28,673	64	49,792	3,499	1,099	3,214	7,812
1982	26,807	21,289	41,773	411	90,280	4,371	725	1,689	6,785
1983	23,778	22,307	62,649	299	109,033	3,295	492	3,165	6,952
1984	15,802	17,432	46,515	17	79,766	3,838	464	2,999	7,301
August 1									
1979	623	8,781	15,033	701	25,138	2,531	374	1,678	4,583
1980	563	9,248	9,940	342	20,093	2,128	403	1,504	4,035
1981	208	5,417	4,206	9	9,840	2,744	446	1,665	4,855
1982	4,453	12,544	23,906	484	41,387	3,191	409	1,877	5,477
1983	6,032	11,190	45,899	36	63,157	2,843	223	2,830	5,896
1984 ²	1,250	11,017	27,425	14	39,706	3,976	50	1,095	5,121

¹These estimates do not include stocks located in States outside the major producing States of Missouri, Mississippi, Arkansas, Louisiana, Texas, and California. ²Preliminary.

Source: Rice Stocks, Crop Reporting Board.

Table 13.—Rough rice milled, total milled production, and milling yields, United States

Year beginning August	Rough milled	Total milled produced ¹	Milling yields	Total heads produced ¹	Milling yields
	<i>1,000 cwt</i>		<i>Pounds/cwt</i>	<i>1,000 cwt</i>	<i>Pounds/cwt</i>
1978	117,961.0	83,427.0	70.72	68,749.0	58.28
1979	124,340.0	89,820.0	72.24	78,942.8	63.49
1980	141,192.0	103,037.0	72.98	89,601.7	63.46
1981	131,922.0	95,074.0	72.07	82,010.7	62.17
1982	118,726.0	84,517.0	71.19	73,713.0	62.09
1983 ²	111,151.0	79,012.0	71.09	68,237.0	61.39

¹Includes brown rice. ²Preliminary.

Sources: Compiled from Monthly Statistical Statements, Rice Miller's Association, and Rice Market News, AMS.

Table 14.—Rough rice: Average price received by farmers

Month	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
	<i>Dollars per cwt</i>													
August	5.16	5.15	5.34	10.90	10.20	9.83	6.65	8.02	8.44	10.00	10.60	11.80	7.31	8.41
September	5.18	5.24	6.37	13.30	10.90	9.19	6.56	8.12	7.56	9.81	10.20	10.70	7.75	8.48
October	5.26	5.46	7.05	14.80	11.30	8.87	6.48	9.13	7.62	10.30	10.90	10.20	7.73	8.80
November	5.19	5.25	7.42	16.70	11.60	8.59	6.46	10.20	7.76	9.83	11.60	9.86	7.78	8.80
December	5.09	5.30	7.64	15.50	10.90	8.51	6.57	11.00	7.98	9.41	13.10	9.34	8.06	8.66
January	5.31	5.53	7.84	15.80	10.80	7.95	6.79	10.70	8.07	9.88	13.20	9.34	8.05	8.57
February	5.44	5.55	8.14	16.90	11.30	7.54	6.87	10.70	7.87	11.00	13.00	9.46	8.26	8.85
March	5.36	5.60	8.26	17.20	11.10	6.17	6.81	10.70	8.18	11.70	13.40	8.99	7.99	8.63
April	5.33	5.58	8.51	15.90	11.00	7.15	6.95	10.80	8.52	11.60	13.80	8.54	8.23	8.49
May	5.30	5.57	8.56	17.20	11.10	7.06	7.30	10.10	8.74	11.30	13.30	8.55	8.23	8.24
June	5.20	5.58	8.74	17.50	11.20	6.82	7.24	9.58	8.73	10.20	11.90	8.54	7.88	8.20
July	5.33	5.35	10.80	11.90	10.00	7.45	6.87	9.49	9.10	10.80	12.80	8.25	7.95	8.18
Weighted average	5.17	5.34	6.73	13.80	11.20	8.35	7.02	9.49	8.16	10.50	12.80	9.05	8.11	8.48
Loan rate	4.86	5.07	5.27	6.07	7.54	8.52	6.19	6.19	6.40	6.79	7.12	8.01	8.14	8.14

Table 15.—Milled rice: Average price, f.o.b. mills, at selected milling centers

Year and type	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Simple average
<i>Dollars per cwt bagged</i>													
<i>Southwest Louisiana</i>													
Long ¹													
1980	20.75	22.00	23.40	25.00	26.75	27.00	27.25	27.70	28.25	28.00	27.90	27.50	25.95
1981	26.40	24.30	23.25	21.90	20.75	19.80	18.60	18.00	17.55	17.60	17.20	17.00	20.20
1982	17.50	17.40	17.50	17.55	18.40	18.35	17.50	17.50	18.50	18.50	18.60	18.75	18.00
1983 ²	19.40	19.75	19.35	19.50	19.50	19.50	19.25	19.25	19.25	19.25	19.25	19.25	19.38
<i>Houston, Texas</i>													
1980	21.00	21.70	23.10	24.75	26.55	26.55	25.75	27.10	27.75	28.00	27.40	27.00	25.55
1981	25.00	24.85	23.50	22.60	22.00	21.75	20.20	19.20	19.00	19.00	18.75	17.75	21.15
1982	18.25	18.75	18.00	18.00	18.00	19.00	19.00	19.00	19.00	19.00	19.10	19.40	18.70
1983 ²	19.50	19.65	20.00	20.00	20.00	20.25	20.25	20.25	20.10	19.50	19.50	19.50	19.88
<i>Arkansas</i>													
1980	20.60	22.00	23.40	24.90	26.10	26.10	25.75	26.70	27.50	28.00	27.90	27.50	25.55
1981	26.40	24.30	23.05	22.30	20.85	19.60	19.00	18.20	17.55	17.40	17.20	16.60	20.20
1982	17.10	17.00	17.00	17.55	18.40	18.35	17.50	17.50	18.00	18.40	18.50	18.50	17.80
1983 ²	18.50	18.50	18.85	19.00	19.00	19.00	18.50	18.50	18.50	18.50	18.50	18.50	18.65
<i>Southwest Louisiana</i>													
Medium ¹													
1980	20.50	20.80	21.60	24.40	26.40	27.00	27.10	27.50	27.55	28.00	28.00	27.75	25.55
1981	26.40	24.20	22.90	21.15	20.00	18.75	17.75	16.10	15.95	16.40	16.20	16.00	19.30
1982	16.50	16.50	16.45	16.65	17.75	17.30	16.50	16.50	16.50	17.10	17.50	17.50	16.90
1983 ²	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50
<i>Arkansas</i>													
1980	20.60	21.30	22.50	24.00	25.75	26.10	25.75	26.70	27.40	28.00	28.00	27.50	25.30
1981	26.40	24.10	22.95	21.30	19.85	18.60	17.90	17.05	16.50	16.40	15.90	15.60	19.40
1982	16.10	16.50	16.10	16.65	17.75	17.10	16.50	16.50	16.60	17.10	17.50	17.50	16.80
1983 ²	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.50	17.20	17.00	17.00	17.00	17.35
<i>California</i>													
Medium ³													
1980	23.00	23.20	24.75	25.00	26.75	30.00	30.00	30.00	30.00	30.00	30.00	30.00	27.70
1981	30.00	27.60	24.50	22.80	21.40	20.50	19.10	18.45	16.90	16.90	16.70	16.40	20.95
1982	16.25	16.10	15.55	15.50	15.50	16.50	16.00	16.00	16.00	15.90	15.95	15.75	15.90
1983 ²	15.65	15.50	15.70	15.50	15.50	15.50	15.50	15.38	15.25	15.25	15.25	15.25	15.44
Short ³													
1980	23.00	23.20	24.75	25.00	26.75	30.00	30.00	30.00	30.00	30.00	30.00	30.00	27.70
1981	30.00	28.25	25.75	23.90	22.00	22.00	20.25	19.50	18.25	18.25	18.25	18.10	22.05
1982	17.20	16.70	15.55	15.50	15.50	16.90	16.00	16.00	16.00	16.00	16.00	16.00	16.10
1983 ²	15.80	15.50	15.70	15.50	15.50	15.50	15.50	15.38	15.25	15.25	15.25	15.25	15.45

¹U.S. No. 2—broken not to exceed 4 percent. ²Preliminary. ³U.S. No. 1.

Source: Compiled from Rice Market News, AMS.

Table 16.—Rice byproducts: Monthly average price, southwest Louisiana

Year and type	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Simple average
<i>Dollars per cwt, bagged¹</i>													
Milled second head													
1980	11.05	10.70	11.00	11.15	12.45	12.90	12.75	13.55	13.40	14.45	14.55	14.10	12.65
1981	13.00	11.90	11.00	11.00	11.00	10.60	10.00	8.60	9.25	10.00	10.00	10.00	10.55
1982	10.00	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75	9.75
1983	9.75	10.25	10.25	10.25	10.25	10.25	10.25	10.81	10.20	10.00	10.00	10.00	10.19
<i>Dollars per ton²</i>													
Rice bran, fob mills													
1980	76.90	84.70	86.40	95.50	N.Q.	101.90	73.60	59.10	57.50	60.00	71.60	69.15	76.05
1981	51.50	49.60	52.75	59.90	73.65	82.50	64.35	50.40	55.50	57.50	61.10	N.Q.	59.90
1982	52.80	53.00	54.00	77.65	85.00	77.50	52.15	47.25	59.65	70.30	61.25	N.Q.	62.80
1983	62.15	70.00	94.00	108.35	120.85	98.50	57.50	50.00	67.50	60.00	N.Q.	59.00	77.08
<i>Dollars per ton²</i>													
Rice millfeed, fob mills													
1980	29.50	37.40	35.00	36.90	48.40	54.00	15.00	11.00	14.95	17.00	27.00	31.40	29.80
1981	22.60	10.90	17.75	22.00	30.65	29.75	16.50	13.15	13.40	15.40	19.40	N.Q.	19.25
1982	16.00	16.75	15.25	26.15	35.00	45.00	13.50	15.25	19.35	23.60	22.10	23.00	22.60
1983	24.00	25.40	33.30	42.10	61.65	53.00	22.50	24.75	31.20	21.25	25.00	27.75	32.66

¹U.S. No. 4 or better. ²Prices quoted as bulk. NQ = not quoted.

Source: Compiled from Rice Market News, AMS.

Table 17.—Brewers' prices: Monthly average price for Arkansas brewers' rice and New York brewers' corn grits

Year and State	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Simple average
<i>Dollars per cwt</i>													
Arkansas													
1980/81	9.75	9.75	9.80	10.10	10.00	10.00	10.00	10.00	10.00	10.00	9.60	9.50	9.90
1981/82	9.30	9.00	8.55	8.25	8.25	8.20	7.60	7.40	7.30	7.00	7.00	6.80	7.90
1982/83	6.55	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
1983/84	6.50	6.75	7.00	7.00	6.90	6.76	6.63	6.50	6.62	6.70	6.90	7.10	6.78
New York													
1980/81	11.60	12.11	12.26	12.74	12.42	12.44	12.60	12.64	12.72	12.42	12.57	12.85	12.45
1981/82	12.22	10.45	10.16	9.96	9.97	9.97	10.28	10.48	10.82	10.75	10.66	10.43	10.51
1982/83	9.91	9.75	9.60	9.74	9.78	10.07	10.52	10.82	11.35	11.32	11.58	12.06	10.54
1983/84	12.85	13.06	12.77	12.64	11.96	11.81	11.95	12.58	12.99	12.95	13.19	13.01	12.65

Sources: Compiled from Rice Market News, AMS, and Milling and Baking News.

Table 18.—Thailand milled rice prices, f.o.b. Bangkok,¹

Type	1980/81	1981/82	1982/83	1983/84
<i>Dollars per metric ton</i>				
100% 1st grade				
August	463	528	330	326
September	463	517	313	349
October	463	485	295	336
November	484	458	299	333
December	491	409	307	321
January	491	378	301	310
February	501	364	318	302
March	529	370	330	303
April	540	356	330	305
May	544	342	330	302
June	560	334	319	301
July	551	325	311	318
Average	507	406	315	317
100% 2nd grade				
August	450	508	300	286
September	450	497	283	309
October	450	465	266	300
November	471	438	269	293
December	478	389	277	281
January	478	352	270	268
February	488	332	280	263
March	514	340	290	263
April	525	326	290	265
May	529	312	290	263
June	545	304	279	266
July	533	295	271	283
Average	493	380	280	278
5% broken				
August	442	498	287	279
September	442	487	270	299
October	442	455	255	290
November	463	428	258	283
December	470	379	266	271
January	470	342	260	258
February	480	324	270	253
March	505	325	282	253
April	515	311	282	256
May	519	299	280	253
June	535	291	269	256
July	523	282	261	273
Average	484	368	270	269

¹Includes export premium, export tax, and cost of bags. Packed in bags of 100 kgs net.

Source: Compiled from Rice Market News, AMS.

Table 19.—Milled rice: Average c.i.f. quotations at Rotterdam

Type	1980/81	1981/82	1982/83	1983/84
<i>Dollars per metric ton</i>				
U.S. No. 2 milled, 4%, bagged				
August	552	629	515	535
September	567	601	463	535
October	602	587	449	530
November	639	562	446	520
December	656	538	451	518
January	661	517	459	518
February	670	508	488	530
March	672	485	496	534
April	672	469	504	531
May	675	474	513	529
June	662	487	532	529
July	649	506	535	513
Average	640	530	488	527
Thai SWR 100% Grade A, bagged				
August	535	603	369	383
September	543	600	363	410
October	539	570	347	392
November	545	520	352	369
December	550	483	363	355
January	580	438	360	351
February	614	424	366	353
March	627	426	389	354
April	620	422	376	355
May	632	408	382	358
June	657	376	372	363
July	641	346	367	382
Average	590	468	367	369
Thai SWR 100% Grade B, bagged				
August	520	583	342	345
September	528	579	338	306
October	523	549	322	351
November	528	497	328	329
December	535	463	338	317
January	549	418	336	315
February	588	402	335	315
March	602	405	348	316
April	600	401	336	315
May	611	382	342	314
June	633	352	335	319
July	619	319	330	337
Average	570	446	336	328

Source: Compiled from Rice Market News, AMS.

Table 20.—World rice supply and utilization

Year	Area harvested	Yield ¹	Production ²		Exports ³	Total use ⁴	Ending stocks ⁵	Stocks to use ratio ⁶
	Million hectares		Rough	Milled				
1960/61	120.1	1.95	233.8	160.0	6.5	160.3	8.0	5.0
1961/62	115.7	1.86	215.7	147.3	6.3	147.7	7.0	4.8
1962/63	119.6	1.91	228.2	155.2	7.3	155.3	6.9	4.4
1963/64	121.5	2.05	248.4	169.1	7.7	167.2	8.7	5.2
1964/65	125.3	2.12	265.6	180.8	8.2	177.8	11.8	6.6
1965/66	124.0	2.05	254.2	173.3	7.9	173.1	12.0	6.9
1966/67	125.7	2.09	262.5	179.3	7.8	180.7	10.6	5.9
1967/68	127.0	2.19	277.8	189.4	7.2	186.6	13.4	7.2
1968/69	128.7	2.23	287.0	195.6	7.5	192.3	16.7	8.7
1969/70	131.4	2.25	295.9	201.6	8.2	199.7	18.6	9.3
1970/71	132.7	2.36	313.5	213.6	8.6	214.5	17.7	8.3
1971/72	134.8	2.35	317.5	216.4	8.7	218.8	15.3	7.0
1972/73	132.7	2.31	307.2	209.6	8.4	214.6	10.3	4.8
1973/74	136.5	2.45	334.7	228.0	7.7	225.9	12.5	5.5
1974/75	137.8	2.41	332.1	226.3	7.3	228.1	10.7	4.7
1975/76	142.7	2.51	358.4	243.8	8.4	235.2	19.3	8.2
1976/77	141.3	2.46	348.3	236.8	10.6	238.4	17.7	7.4
1977/78	143.3	2.58	370.0	251.4	9.6	246.4	22.8	9.2
1978/81	144.1	2.69	387.6	263.7	12.0	258.6	27.8	10.8
1979/80	141.4	2.67	377.4	257.4	12.7	261.9	23.3	8.9
1980/81	144.3	2.76	398.8	271.6	13.1	272.2	22.1	8.1
1981/82	145.3	2.84	412.4	280.6	11.6	281.3	21.2	7.5
1982/83	140.7	2.98	419.1	285.3	11.8	289.7	16.9	5.8
1983/84 ⁷	144.7	3.10	449.0	305.4	12.1	305.4	16.8	5.5
1984/85 ⁸	145.8	3.10	451.8	307.5	11.7	308.9	16.1	5.2

¹Yields are based on rough production. ²Production is expressed on both rough and milled basis: stocks, exports, and utilization are expressed on a milled basis. ³Exports quoted on yearly basis. ⁴For countries for which stock data are not available, utilization estimates represent "apparent" utilization; i.e., they include annual stock level adjustments. ⁵Stocks data are based on an aggregate of differing market years and should not be construed as representing world stock levels at a fixed point in time. Stocks data are not available for all countries and exclude the USSR, China, North Korea, and parts of Eastern Europe. ⁶Stocks-to-use represents the ratio of marketing year ending stocks to total utilization. ⁷Preliminary. ⁸Projected.

Source: Compiled from World Grain Situation, FAS.

Table 21.—World rice production and stocks: Selected countries or regions¹

Country or region	Crop year ²				
	1980/81	1981/82	1982/83	1983/84	1984/85 as as Sept. 12
	Million metric tons				
Bangladesh	20.8	20.5	21.3	21.9	21.5
Burma	13.2	13.6	14.5	14.8	15.0
China, Mainland	139.9	144.0	161.2	168.9	169.0
India	80.5	80.5	69.7	88.5	86.0
Indonesia	29.7	32.8	33.6	34.5	36.0
Japan	12.2	12.8	12.8	13.0	14.2
Korea, Rep. of	6.0	7.1	7.3	7.4	7.3
Pakistan	4.7	5.1	5.2	5.2	5.3
Thailand	17.4	17.8	16.9	18.8	18.5
Subtotal	324.4	334.2	342.5	373.0	372.8
Australia	.7	.9	.5	.6	.8
Brazil	8.6	9.2	7.8	9.0	9.5
EC-10	1.1	1.0	1.1	1.1	1.1
All others	57.1	59.0	60.2	60.8	61.5
Total non-U.S.	392.2	403.1	412.1	444.5	445.7
U.S.	6.6	8.3	7.0	4.5	6.2
World total	398.8	412.4	419.1	449.0	451.8
Ending stocks ³					
Non-U.S.	21.5	19.6	14.6	15.4	15.0
U.S.	.5	1.6	2.3	1.5	1.8
World total	22.1	21.2	16.9	16.9	16.8

¹Production is rough basis, but ending stocks are milled basis. ²World rice harvest stretches over 6-8 months. Thus, crop year represents the crop harvested in late 1979 and early 1980 in the Northern Hemisphere and the crop harvested in early 1980 in the Southern Hemisphere. ³Stocks are based on an aggregate of different local marketing years, and should not be construed as representing world stock levels at a fixed point in time. In addition, stocks data are not available for all countries.

Source: Compiled from World Grain Situation, FAS.

Table 22.—World rice trade (milled basis): Exports and imports of selected countries or regions¹

Country or region	Calendar year				1985 as of Sept. 14
	1981	1982	1983	1984	
1,000 metric tons					
Exports					
United States	3,008	2,487	2,330	2,000	2,200
Argentina	110	92	70	185	140
Australia	335	530	251	400	500
Burma	674	701	750	850	900
China, Mainland	583	460	550	600	600
China, Taiwan	92	307	531	275	300
EC-10	812	625	800	769	742
Egypt	134	22	21	50	70
Guyana	78	35	45	40	35
India	1,143	633	165	150	100
Japan	795	318	321	100	0
Korea, N.	200	250	250	250	250
Nepal	43	50	0	0	50
Pakistan	1,127	794	1,299	1,300	1,150
Philippines	83	0	40	0	0
Thailand	3,049	3,620	3,700	4,250	4,000
Uruguay	215	227	189	225	180
Other	647	460	518	715	687
World trade	13,128	11,611	11,830	12,359	11,894
Imports					
Bangladesh	34	296	82	650	400
Brazil	142	124	400	150	50
Canada	99	108	115	120	125
China, Mainl.	110	250	75	100	100
Cuba	199	200	200	150	200
East Europe	353	299	288	310	295
EC-10	1,079	1,080	1,114	945	980
India	70	10	310	800	500
Indonesia	543	332	1,175	500	800
Iraq	350	369	474	500	500
Iran	583	475	680	680	700
Ivory Coast	335	363	434	350	350
Korea, Republic of	2,292	228	216	50	150
Kuwait	95	100	110	110	110
Malagasy	191	357	250	200	250
Malaysia	267	403	352	450	400
Mexico	66	16	0	155	70
Nigeria	686	666	711	775	750
Peru	103	58	101	35	0
Portugal	128	110	110	70	70
Saudi Arabia	427	471	500	525	550
Senegal	340	321	365	375	380
South Africa	134	146	158	165	170
Sri Lanka	168	217	157	75	130
Syria	72	102	120	120	125
U.A. Emirates	285	170	175	175	175
USSR	1,283	859	400	450	400
Viet Nam, Soc. Rep.	30	150	30	150	100
Other	2,402	3,331	2,728	3,224	3,064
World Trade	13,128	11,611	11,830	12,359	11,894

Source: Compiled from World Grain Situation, FAS.

Table 23.—U.S. rice exports by type¹

Crop year	Regular milled	Brown	Parboiled	Rough	Brokens	Other	Total ²
<i>1,000 metric tons</i>							
1973	1,080.1	165.2	345.7	0.2	11.3	1.0	1,603.6
1974	1,388.3	546.5	242.5	.3	14.3	2.5	2,194.4
1975	777.3	535.8	406.0	.3	11.6	.9	1,731.8
1976	1,215.3	346.7	459.2	32.5	37.7	5.7	2,097.0
1977	1,275.8	232.7	502.5	132.5	87.1	39.4	2,270.2
1978	1,388.8	276.1	627.3	90.6	20.8	27.8	2,431.4
1979	1,461.9	475.4	598.4	54.5	40.1	75.5	2,705.9
1980	957.7	1,202.7	781.7	13.5	18.0	54.0	3,027.6
1981	941.8	502.6	1,000.9	18.7	5.9	39.1	2,681.9
1982	954.1	354.3	846.5	188.9	12.7	35.1	2,218.7
1983	882.4	334.3	821.8	105.0	37.6	89.8	2,270.9

¹All rice is reported on a milled-equivalent basis. ²Numbers may not add due to rounding.

Source: U.S. Bureau of the Census.

Table 24.—U.S. milled rice exports by type of sale

Fiscal year ¹	Commercial	Under Government programs				Total exports
		Title I ²	Title II ³	Aid ⁴	Total	
1,000 metric tons						
1978	1,665	466	64	—	530	2,195
1979	1,849	418	67	—	485	2,334
1980	2,319	403	137	—	540	2,859
1981	2,997	247	112	—	359	3,356
1982	2,776	300	65	—	365	3,141
1983	1,782	427	27	—	454	2,209

¹Fiscal year has been changed from July-June to October-September. ²Includes local currency, convertible local currency, dollar credit, and private trade. ³Includes government-to-government, world food, and voluntary relief. ⁴Mutual Security Aid.

Source: Office of the General Sales Manager, USDA.

Table 25.—Rice (rough equivalent): CCC operations and privately held stocks, 1970-83

Crop of	Placed under price support				At year end July 31				
	Loans	Direct purchases	Total	Delivered to CCC ¹	Total carryover	CCC stocks and loans outstanding			Privately held ("free") stocks ³
						Stocks owned by CCC ²	Under loan ²	Total	
					1,000 cwt				
1970	20,787	733	21,520	3,528	18,634	9,329	138	9,467	9,167
1971	31,235	107	31,342	1,214	11,434	2,720	27	2,747	8,687
1972	22,926	—	22,926	1	5,139	148	—	148	4,991
1973	19,146	—	19,146	—	7,842	—	—	—	7,842
1974	9,256	—	9,256	1	7,058	—	4	4	7,054
1975 ⁴	21,475	1,781	23,256	19,214	36,875	19,214	—	19,214	17,661
1976 ⁴	23,425	608	24,033	7	40,501	18,610	⁵ 111	18,721	21,780
1977 ⁴	19,541	—	19,541	—	27,398	10,772	—	10,772	16,626
1978 ⁴	27,114	—	27,114	—	31,618	8,300	—	8,300	23,318
1979 ⁴	25,911	—	25,911	—	25,679	1,700	—	1,700	23,979
1980 ⁴	24,973	—	24,973	—	16,493	—	—	—	16,493
1981 ⁴	42,848	—	42,848	17,500	48,987	17,500	—	17,500	31,487
1982 ⁴	65,375	—	65,375	6,120	71,440	22,320	—	22,320	44,312
1983 ⁴ , ⁶	40,184	766	40,950	23,866	46,909	25,000	—	25,000	21,909

¹Includes direct purchases. ²May include small quantities of new-crop rice in last few years. ³Derived by subtracting CCC stocks and loans outstanding from total carryover. ⁴Based on operating reports, prior years based on fiscal reports. ⁵Under current loan 64,787 cwt.; under resale 47,000 cwt. ⁶Preliminary.

Source: Agriculture Stabilization and Conservation Service, USDA.

Table 26.—Rice: Value factors for computing support rates for various rice classes¹

Group and variety	1978	1979	1980	1981	1982	1983	1984
<i>Dollars per cwt</i>							
National average loan rate	6.40	6.79	7.12	8.01	8.14	8.14	8.00
<i>Cents per 100 pounds</i>							
Head rice, whole kernels							
Long grain	11.25	12.18	12.76	14.54	14.75	14.96	14.96
Medium/short grain	9.75	10.43	11.01	12.79	12.75	12.21	10.81
Broken rice, all classes	4.65	4.40	4.25	4.70	5.00	6.20	6.20
Premiums and Discounts							
By grades							
U.S. No. 1	+5	+8	+8	+8	+8	—	—
2	0	0	0	0	0	—	—
3	-15	-15	-15	-15	-15	-30	-30
4	-30	-30	-30	-30	-30	-60	-60
5	-50	-50	-50	-50	-50	-1.00	-1.00

¹The method of computing 1978-83 crop rough rice basic support rates is the same as that used in prior rice programs except that under the new rice standards, rice is classified by size and shape of kernel rather than variety. The basic support rates are applicable to No. 2 rice and will be adjusted by the above premium and discounts for U.S. grades per lb. A further discount for location, to adjust for transportation costs of moving the rough rice to an area where competitive milling facilities are available, will also be made for rice produced in certain areas.

Source: Agricultural Stabilization and Conservation Service, USDA.

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